

Ocean Sci. Discuss., referee comment RC2
<https://doi.org/10.5194/os-2021-51-RC2>, 2021
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Comment on os-2021-51

Anonymous Referee #2

Referee comment on "Sea surface salinity short-term variability in the tropics" by
Frederick M. Bingham and Susannah Brodnitz, Ocean Sci. Discuss.,
<https://doi.org/10.5194/os-2021-51-RC2>, 2021

Review of the manuscript entitled "Sea Surface Salinity Short Term Variability in the
Tropics" by Bingham and Brodnitz.

In this study, authors describe the short-term variability in sea surface salinity along the
tropics using data from Global tropical moored buoy array and a model output. The
manuscript is mostly clear in explaining the concept and the results, and is well written
and organized. I have few minor comments.

- In the abstract the authors mention that the short-term variability computed is
variability of timescale 5-14 days. But this timescale is not mentioned anywhere in the
manuscript.
- How did you manage the data gaps in the moored buoy data in your analysis? How
continuous is the data? Nothing is mentioned about this in the methods section.
- Authors use current speed to determine the timescale of short-term variability at each
mooring location. Why don't you use power/wave spectrum on the buoy timeseries (or
collocated model data) to understand the timescale of short-term variability?
- Authors suggest that moorings exhibit larger short-term variability during rainy periods
than non-rainy periods. Does it have seasonal variations? For example in Bay of
Bengal, does this conclusion holds during both monsoon season (when there is heavy
precipitation) and non monsoon seasons.
- Also, no description is given on how realistic is the model in capturing the surface
salinity at each mooring location. A comparison (correlation & bias) with the model and
buoy timeseries is lacking.